

## **WHAT IS CLAIMED IS:**

1. An image processing apparatus, comprising:

a reading unit to read distortion amount information showing how much a decoded image is degraded from an original image when data are eliminated from a data sequence, the distortion amount information being included in a code sequence in which the original image is compressed and encoded in accordance with a method capable of progressively displaying the image;

an error detecting unit to detect an occurrence of an error in each unit of the code sequence;

a distortion amount calculating unit to calculate a distortion amount of the decoded image against the original image when the code sequence is decoded after the data are eliminated from the code sequence by using the distortion amount information concerning the data in which the error is detected by the error detecting unit; and

a comparing unit to compare the distortion amount calculated by distortion amount calculating unit with a threshold.

2. The image processing apparatus as claimed in claim 1, further comprising:

a decoding unit to decode the code sequence;

an outputting unit to output image data being decoded when the distortion amount is less than the threshold as a result of the comparing unit; and

a canceling unit to cancel the decoding unit to decode the code sequence so as not to output the image data being decoded.

3. The image processing apparatus as claimed in claim 1, wherein JPEG 2000 or Motion JPEG 2000 is applied to the method and the each unit of the code sequence is one packet as a unit in that the occurrence of the error is detected and the distortion information is used.

4. The image processing apparatus as claimed in claim 1, wherein the distortion calculating unit calculates a total distortion amount of the decoded image against the original image by accumulating the distortion amount of the each unit of the code sequence.

5. The image processing apparatus as claimed in claim 1, further comprising an informing unit to inform a user that the error occurred to the image, when the distortion amount is more than the threshold.

6. An article of manufacture having one or more recordable media storing instructions thereon which, when executed by a computer, cause the computer to process an image using a method comprising:

reading distortion amount information showing how much a decoded image is degraded from an original image when data are eliminated from the data sequence, the distortion amount information included in a code sequence in which the original image is compressed and encoded in accordance with a method capable of progressively displaying the image;

detecting an occurrence of an error in each unit of the code sequence;

calculating a distortion amount of the decoded image against the original image when the code sequence is decoded after the data are eliminated from the code sequence by using the distortion amount information concerning the data in which the error is detected in the decoding step; and

comparing the distortion amount calculated in the calculating step with a threshold.

7. An article of manufacture having one or more recordable media storing instructions thereon which, when executed by a computer, cause the computer to process an image using a method comprising:

reading distortion amount information showing how much a decoded image is degraded from an original image when data are eliminated from the data sequence, the distortion amount information included in a code sequence in which the original image is

compressed and encoded in accordance with a method capable of progressively displaying the image;

detecting an occurrence of an error in each unit of the code sequence;

calculating a distortion amount of the decoded image against the original image when the code sequence is decoded after the data are eliminated from the code sequence by using the distortion amount information concerning the data in which the error is detected by the decoding code; and

comparing the distortion amount calculated by the calculating code with a threshold.